

Claims

We claim:

1. A skateboard assembly comprising:
 - a board;
 - a housing configured for attachment to the board, the housing having a longitudinal axis, the housing having a retaining member;
 - 5 a resilient member retained by the retaining member of the housing;
 - a mounting member having at least one flat surface and disposed through the resilient member in the direction of the longitudinal axis of the housing, at least one of the flat surfaces engaging the resilient member; and
 - 10 an axle retained by the mounting member and pivotal with respect to the housing, the axle having at least one mounting arm extending transverse to the longitudinal axis of the housing; and
 - a wheel rotatably mounted on the mounting arm.
2. The skateboard assembly of claim 1, wherein the housing comprising a plate configured for attachment to the board, and wherein the retaining member comprising a pair of legs attached to the plate and extending from the plate, and a cap attached to the ends of the pair of legs opposite from the plate.
3. The skateboard assembly of claim 1, wherein the resilient member is made of urethane.
4. The skateboard assembly of claim 1, wherein the mounting member is a square pin.
5. The skateboard assembly of claim 1, wherein the resilient member comprising four sections retained by the retaining member of the housing, the four sections disposed between the retaining member of the housing and the mounting member.
6. The skateboard assembly of claim 5, wherein the four sections of the resilient member are generally cylindrical shaped extending in the direction of the longitudinal axis of the housing.

7. The skateboard assembly of claim 1, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is generally square shaped having a generally circular shape at each of the four corners of the square, the mounting member disposed through the cavity.
8. The skateboard assembly of claim 1, wherein the axle has a grinding surface located thereon.
9. The skateboard assembly of claim 1, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is square shaped with a pair of corners aligned transverse to the longitudinal axis of the housing, the mounting member disposed through the cavity.
10. The skateboard assembly of claim 1, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is generally square shaped having a generally dovetail shape at each of the four corners of the square, the mounting member disposed through the cavity.
11. The skateboard assembly of claim 1, wherein the resilient member is made of rubber.
12. The skateboard assembly of claim 1, wherein the resilient member has a durometer value between 50 Shore A and 60 Shore D.
13. The skateboard assembly of claim 1, wherein the housing includes a wedge member configured to engage the bottom surface of the board of the skateboard.
14. The skateboard assembly of claim 1, wherein the resilient member has a cavity and a plurality of tendon cavities surrounding the cavity, the tendon cavities at least partially defined by a plurality of tendons located in the resilient member.

15. The skateboard assembly of claim 14, wherein the cavity has a generally square shaped cross section and has a generally dovetail shape at each of the four corners of the square.

16. The skateboard assembly of claim 15, wherein the resilient member has eight tendons and eight tendon cavities.

17. The resilient member of claim 1, further comprising an insert retained by the resilient member and contacted by the mounting member such that the mounting member engages the resilient member.

18. A truck assembly for use on a skateboard, comprising:

a housing configured for attachment to a board of a skateboard, the housing having a longitudinal axis;

a resilient member retained by the housing;

5 a mounting member engaging the resilient member and disposed in the direction of the longitudinal axis of the housing; and

an axle retained by the mounting member and configured for receiving at least one wheel of the skateboard thereon.

19. The truck assembly of claim 18, wherein the mounting member has at least one flat surface.

20. The truck assembly of claim 18, wherein the housing comprising a plate configured for attachment to the board, and a retaining member being a pair of legs attached to the plate and extending from the plate, a cap attached to the ends of the legs opposite from the plate, the resilient member being retained in the retaining member.

21. The truck assembly of claim 18, wherein the resilient member is made of urethane.

22. The truck assembly of claim 18, wherein the mounting member is a square pin.

23. The truck assembly of claim 18, wherein the resilient member comprising four sections retained by the housing, the four sections disposed between the housing and the mounting member.
24. The truck assembly of claim 23, wherein the four sections of the resilient member are generally cylindrical shaped extending in the direction of the longitudinal axis of the housing.
25. The truck assembly of claim 18, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is generally square shaped having a generally circular shape at each of the four corners of the square, the mounting member disposed through the cavity.
26. The truck assembly of claim 18, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is square shaped with a pair of corners aligned transverse to the longitudinal axis of the housing, the mounting member disposed through the cavity.
27. The truck assembly of claim 18, wherein the resilient member defines a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity is generally square shaped having a generally dovetail shape at each of the four corners of the square, the mounting member disposed through the cavity.
28. The truck assembly of claim 18, wherein the resilient member is made of rubber.
29. The truck assembly of claim 18, wherein the resilient member has a durometer value between 50 Shore A and 60 Shore D.
30. The truck assembly of claim 18, wherein the housing includes a wedge member configured to engage the bottom surface of the board of the skateboard.
31. The truck assembly of claim 18, wherein the axle has a grinding surface located thereon.

32. The truck assembly of claim 18, wherein the resilient member has a cavity and has a plurality of tendon cavities surrounding the cavity, the tendon cavities at least partially defined by a plurality of tendons located in the body portion.

33. The truck assembly of claim 32, wherein the cavity is generally square shaped and has a generally dovetail shape at each of the four corners of the square.

34. The truck assembly of claim 33, wherein the resilient member has eight tendons and eight tendon cavities.

35. The truck assembly of claim 18, further comprising an insert retained by the resilient member, the mounting member engaging the insert such that the mounting member engages the resilient member.

36. The truck assembly of claim 18, wherein:
the mounting member has four cylindrical pins; and
the resilient member has four pin cavities, each one of the four cylindrical pins of the mounting member disposed in a separate one of the four pin cavities.

37. A truck assembly for use on a skateboard, comprising;
a housing having a longitudinal axis and a plate configured for attachment to a board of a skateboard, the housing having a retaining member comprising a pair of legs attached to the plate and extending from the plate and having a cap attached to the ends of
5 the pair of legs opposite from the plate;
a resilient member retained by the retaining member of the housing and defining a cavity having open ends aligned in the direction of the longitudinal axis of the housing, the cross sectional shape of the cavity being generally square shaped having a generally circular shape at each of the four corners of the square, the resilient member made of
10 urethane;
a mounting member being a square pin disposed through the cavity of the resilient member in the direction of the longitudinal axis of the housing, the mounting member engaging the resilient member; and

an axle retained by the mounting member and pivotal with respect to the housing,
15 the axle having a mounting arm extending transverse to the longitudinal axis of the
housing, the mounting arm configured for receiving a pair of wheels of the skateboard
thereon.

38. A resilient member for use with a truck assembly, comprising:
a body portion having a cavity disposed from one end of the body portion to an
opposite end of the body portion, the cavity configured for receiving a mounting member
of the truck assembly, and the cavity configured for resisting torsional forces applied by the
5 mounting member.

39. The resilient member of claim 38, wherein the cross sectional shape of the cavity is
generally square shaped.

40. The resilient member of claim 38, wherein the body portion is made of urethane.

41. The resilient member of claim 39, wherein the body portion has a plurality of
tendon cavities surrounding the cavity and extending from one end of the body portion to
an opposite end of the body portion, the tendon cavities at least partially defined by a
plurality of tendons located in the body portion.

42. The resilient member of claim 41, wherein the cavity has a generally dovetail shape
at each of the four corners of the square.

43. The resilient member of claim 42, wherein the body portion has eight tendons and
eight tendon cavities.

44. The resilient member of claim 38, further comprising an insert retained by the body
portion and located in the cavity.

45. The resilient member of claim 38, wherein the body portion has four cavities.